

## REMARKS

The Official Action dated February 1, 2007, has been carefully considered. Indication of allowable subject matter in claims 41-43 is acknowledged and appreciated. Applicants respectfully submit that the following remarks draw attention to aspects of the asserted prior art reference that may have been overlooked by the Examiner, and thereby distinguish and establish the patentability of the presently inventive compositions there over.

Claims 1-8, 10, 12-23, 25-36 and 38-43 are pending in the application and claims 8, 10, 12-14, 21-23, 25-27, 34-36 and 38-43 are currently subject to examination.

### 35 U.S.C. § 103(a)

The Examiner maintains the rejection of claims 8, 10, 12-14, 21-23, 25-27, 34-36 and 38-40 as being unpatentable over U.S. Patent Application Publication No. 2001/0008879 A1 to Willey (hereafter "Willey"). The Examiner asserts that Willey fails to disclose "a composition which reads on the applicants claims with sufficient specificity to constitute anticipation," but submits that it would have been obvious to make the applicants' compositions because Willey teaches that all of the ingredients recited by the applicants "are suitable for inclusion in a bleaching composition," and that the recited composition would be expected to have properties similar to the compositions which are exemplified absent a showing to the contrary. The Examiner rejects Applicant's argument that Willey teaches away from compositions comprising hypohalite as unpersuasive because, according to the Examiner, Willey impliedly teaches that hypohalites may be added to the photobleaching compositions, including those containing oxygen bleaches, to increase efficacy of bleaching action. This rejection is traversed and reconsideration is respectfully requested.

The present independent composition embodiments in claims 8, 21 and 34 require, inter alia, oxidant, halide, and buffer, and are formulated to achieve in situ generation of hypohalite. Generally, the present invention provides an environmentally benign decontaminant solution comprising at least one oxidant and halide salt for neutralizing, e.g., chemical toxicants, and specifically provides methods for the in situ generation of hypochlorite by a monopersulfate compound and an alkali metal chloride salt.

Applicant noted in a prior response (see Response dated January 13, 2007) that Willey cannot render the present inventive compositions obvious because Willey expressly teaches away from the combination of ingredients disclosed as essential to the functioning of the present inventive compositions. Willey teaches low hue photobleaching compositions comprising specifically defined photoactivators and **optionally** comprising salts, bleaching agents or bleach activators, or other elements. Willey is emphatic and unequivocal that suitable bleaching agents for optional use in the Willey photoactivator compositions **do not include hypohalite (e.g., hypochlorite) bleaches** (paragraph [0314]). In the sole Willey claim directed to a "bleaching composition," Willey expressly limits and defines the compositions as comprising a "non-hypohalite bleach" (claim 11). Further, Willey expressly discloses that one advantage of the Willey photobleaching systems is to provide "more fabric and color safe systems than conventional bleaches (i.e. hypochlorite)" [0277]. In his arguments and rejection, the examiner combines one Willey adjunct ingredient (a salt, namely sodium chloride) with another optional ingredient (a bleaching agent, namely OXONE), thereby generating a hypohalite, which is expressly prohibited in the Willey disclosure.

However, the examiner persists that Willey teaches such a combination. Reviewing more closely Willey's disclosure of salts and bleaching agents, Willey references the inclusion of salts (such as sodium chloride) in his low hue photobleaches in four instances: (1) as an optional element of his fabric sterilization formulation, with no reference to a bleaching agent or bleach activator which, in combination with the salt, would produce a hypohalite [0295]; (2) as an optional element of his surface bleaching formulation, with no reference to a bleaching agent or bleach activator which, in combination with the salt, would produce a hypohalite [0296]; (3) as an optional substance to "increase the action" (undefined) of a formulation, with no reference to a bleaching agent or bleach activator which, in combination with the salt, would produce a hypohalite [0303]; and (4) as an optional adjunct ingredient defined as inert, filler salts, again with no reference to a bleaching agent or bleach activator which, in combination with the salt, would produce a hypohalite [0336-0337]. The examiner argues that this third reference teaches that the addition of sodium chloride increases the action, "presumably the bleaching action", of the formulation. Possibly, Willey references the "photobleaching" action of the photochemical single oxygen generators described as the invention in Willey. Alternatively, the fourth reference recited above provides an inference that the salts (such as sodium chloride) are used in Willey's formulation exclusively as an inert (therefore inactive) filler; in fact, salts are commonly used as fillers in household disinfecting products. As a "filler," they serve the purpose of providing bulk to the formulation, thereby increasing the surface area to which it may be applied (and thus increasing the "action" of the formulation). However, if combined with the optional component OXONE, they may cease to function in either of these manners, but rather may be destroyed in the generation of a hypohalite. Thus, the combination proposed by the examiner does not only generate the prohibited hypohalite, but also seemingly destroys the purposes of the salt in the formulation.

Another distinct group of optional ingredients referenced by Willey are bleaching agents (such as OXONE) and bleach activators [0313-0327]. While sodium chloride is known to function similar to a bleach activator for the bleaching agent OXONE, it is conspicuously missing from the extensive list of suitable bleach activators in Willey (in accord with Willey's express teaching against the use of a hypohalite bleach). Furthermore, since Willey directly contemplates the use of a bleach activator with a bleach agent (and prefers such a combination with peroxygen bleaching agents [0319]), there is no teaching or suggestion to use a salt to serve a similar purpose. If additional bleaching "action" is desired, Willey clearly suggests choosing a bleach activator as described in his disclosure. Thus, there is no support in the Willey disclosure to use a salt in lieu of a bleach activator, particularly when the combination of the bleach agent and the salt generate the prohibited hypohalite. Furthermore, Willey specifically references the combination of an abrasive with a bleaching agent "to create more intimate contact between hard surface stain and the surfactant and/or bleaching agents..." [0337]. No such specific combination is found between OXONE and sodium chloride, or even a bleaching agent and a salt that would generate the prohibited hypohalite.

For the reasons set forth above, it is absolutely clear that Willey teaches against the use **as optional ingredients** in his formulation both a persulfate bleach, such as OXONE, and a halide salt, such as sodium chloride, which when combined forms a **hypochlorite**. None of the description or examples in Willey suggest such a composition, and his express words teach emphatically against it. Applicant submits that this language constitutes a classic and unequivocal "teaching away" from bleaching compositions comprising hypohalite oxygen bleaches.

To "infer" means to reason logically from the circumstances, or derive logical conclusions from known premises. Willey teaches photobleaching compositions, certain of which may contain

oxygen bleaches. Willey teaches the addition of sodium chloride to some compositions in order to “increase the activity.” Willey expressly prohibits compositions comprising a hypohalite oxygen bleach. The inference that flows logically from the totality of these teachings is that sodium chloride or any halide salt may not be added to a Willey composition containing an oxygen bleach in order to avoid producing the prohibited hypohalite. Applicants respectfully submit that there is no logical line of reasoning that leads to the Examiner’s “inference” that the Willey teachings stand for the suggestion that sodium chloride or hypohalite may be added to Willey compositions comprising oxygen bleaching agents.

To establish prima facie obviousness of the claimed invention, all the claim limitations must be taught or suggested by the prior art, *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). A prima facie case of obviousness, if established, may be rebutted by a showing that the prior art teaches away from the claimed invention, *In re Geisler*, 116 F.3d 1465, 1469, 1471, 43 USPQ2d 1362 (Fed. Cir. 1997). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant” *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130 (Fed. Cir. 1994). **Clear discouragement of a combination constitutes teaching away**, *In re Fulton*, 391 F.3d 1195, 1199-1200, 73 USPQ2d 1141 (Fed. Cir. 2004). Willey expressly teaches that hypohalite, including hypochlorite, is excluded from the Willey photobleaching compositions. The *logical* inference, therefore, is that Willey prohibits combinations of ingredients which would yield hypohalite. Applicants’ invention, on the other hand, depends in substantial part on the in situ generation of hypohalite by the unique combination of ingredients including specified oxidants and halide salts in water, in order to achieve the desired synergism. The presently inventive compositions are expressly formulated to achieve generation of the very species expressly excluded from the compositions of Willey. Hence, instant independent claims 8, 21 and 34, and the claims dependent therefrom, are nonobvious and patentable over Willey. The rejection of these claims under 35 U.S.C. § 103(a) is therefore overcome and reconsideration is respectfully requested.

In view of the prior claim amendments and present comments, the applicant believes that each and every issue raised by the examiner under this rejection has been addressed and overcome. Applicant respectfully submits that the present application is in condition for allowance. The examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully solicited.

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Respectfully submitted,

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